

1. An intelligent system control agent for coordinating user requested jobs among a plurality of clients, comprising:

a user interface module configured to receive user requests;

a client selection module configured to select one of a plurality of clients to service a user request according to a predetermined criterion, the clients comprising a plurality of queue types, each having an individual scheme for prioritizing jobs; and

a communication module configured to submit the user request to the selected client.

2. The intelligent system control agent of claim 1, further comprising a state awareness module configured to maintain an awareness of the state of the selected client.

3. The intelligent system control agent of claim 1, further comprising an agent communication protocol module configured to communicate with software located within a client of the plurality of clients.

4. The intelligent system control agent of claim 1, further comprising an agent endpoint module configured to enable the relocation of the system control agent.

5. The intelligent system control agent of claim 1, further comprising a federation module configured to allow cross-communication and interaction between a plurality of system control agents.

6. The intelligent system control agent of claim 1, further comprising a job relocation module configured to relocate a user requested job from one client to another.

1 7. The intelligent system control agent of claim 1, further comprising a state
2 storage module configured to store the state of jobs being relocated from one client to
3 another;

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5 8. A system for remotely controlling clients from a central location, the
6 system comprising:

7 a plurality of clients;

8 an agent configured to receive user requests from a user and determine
9 based upon a predetermined criterion which of a plurality of the clients to submit
10 each user request to, the clients comprising a plurality of queue types, each having
11 an individual scheme for prioritizing jobs; and

12 a communication channel configured to send the requests to the specified
13 client.

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15 9. The system of claim 8, further comprising a job execution module
16 configured to determine a suitable queue for each request sent to the client.

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18 10. The system of claim 9, wherein the job execution module comprises an
19 asynchronous queue configured to run requests simultaneously within a specified client.

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21 11. The system of claim 9, wherein the job execution module comprises a
22 synchronous queue configured to run requests in the order the requests were received by a
23 specified client.

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25 12. The system of claim 9, wherein the job execution module comprises an
26 exclusive queue configured to run requests exclusive of any other requests in any other
27 queue on the system.

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2 13. The system of claim 8, further comprising a stub software module
3 configured to control execution of a request residing on a specified client.

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5 14. The system of claim 13, wherein at least one of the clients is remote to the
6 agent.

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8 15. A method of operating a software control agent, comprising:
9 receiving a user request;
10 automatically selecting based upon a predetermined criterion one of a
11 plurality of clients to submit the request to for service of the request, the clients
12 comprising a plurality of queue types, each having an individual scheme for
13 prioritizing jobs; and
14 sending the request over a communication channel to the selected client.

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16 16. The method of claim 15, further comprising automatically relocating a
17 software control agent from one computer station within a network to another computer
18 station within a network.

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20 17. The method of claim 15, further comprising maintaining an awareness of
21 the state of a client of the plurality of clients.

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23 18. The method of claim 15, further comprising providing an agent
24 communication protocol module and communicating with the software located within the
25 client.

1 19. The method of claim 15, further comprising providing an agent endpoint
2 module configured to allow the mobility of an agent from one system to another.

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4 20. The method of claim 15, further comprising communicating and
5 interacting with a plurality of agents.

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7 21. The method of claim 15, further comprising relocating a user requested job
8 from one client to another.

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10 22. The method of claim 21, further comprising relocating a user requested job
11 from one client to another.

1 23. The method of claim 16, wherein automatically relocating an agent from
2 one computer system within a network to another computer system within a network
3 further comprises:

4 instructing the agent to relocate to a known agent endpoint by a system
5 administrator;
6 stopping to accept new job requests by the agent;
7 waiting for pending/current requests relocations to finish by the agent;
8 flushing in-process requests to a state storage system by the agent;
9 requesting the new endpoint to instantiate a new agent by the agent;
10 waiting while the new agent populates its database with the data from the
11 state storage system by the agent;
12 sending a message to all federated agents that the agent for this domain is
13 relocated to the new agent by a first agent;
14 sending a message to all clients in the domain that the agent is relocated to
15 the new agent by the first agent; and
16 sending a request to the first agent's endpoint to close the first agent by the
17 new agent.

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19 24. The method of claim 15, further comprising automatically relocating a
20 request from one client within a network to another client within the network.

1 25. The method of claim 24, wherein automatically relocating a request from
2 one client within a network to another client within a network further comprises:

3 instructing a client to relocate a current request by a system administrator
4 or agent;
5 sending requests to a state storage system by a client;
6 sending instructions to a new client to access requests from the state
7 storage system by the agent;
8 accessing requests from the state storage system by the new client; and
9 relocating the request to the new client station.

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11 26. An article of manufacture comprising a storage medium readable by a
12 processor and to perform a method of operating a software control agent, comprising:

13 receiving a user request;
14 automatically selecting based upon a predetermined criterion one of a
15 plurality of clients to submit the request to for service of the request; and
16 sending the request over a communication channel to the selected client.

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18 27. The article of manufacture of claim 26, further comprising automatically
19 relocating a software control agent from one computer station within a network to another
20 computer station within a network.

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22 28. The article of manufacture of claim 26, further comprising maintaining an
23 awareness of the state of a client of the plurality of clients.

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25 29. The article of manufacture of claim 26, further comprising providing an
26 agent communication protocol module and communicating with the software located
27 within the client.

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2 30. The article of manufacture of claim 26, further comprising providing an
3 agent endpoint module configured to allow the mobility of an agent from one system to
4 another.

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6 31. The article of manufacture of claim 26, further comprising automatically
7 relocating a user requested job from one client within a network to another client within
8 the network.

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10 32. The article of manufacture of claim 27, wherein automatically relocating
11 an agent from one computer system within a network to another computer system within
12 a network further comprises:

13 instructing the agent to relocate to a known agent endpoint by a system
14 administrator;
15 stopping to accept new job requests by the agent;
16 waiting for pending/current requests relocations to finish by the agent;
17 flushing in-process requests to a state storage system by the agent;
18 requesting the new endpoint to instantiate a new agent by the agent;
19 waiting while the new agent populates its database with the data from the
20 state storage system by the agent;

21 sending a message to all federated agents that the agent for this domain is
22 relocated to the new agent by a first agent;

23 sending a message to all clients in the domain that the agent is relocated to
24 the new agent by the first agent; and

25 sending a request to the first agent's endpoint to close the first agent by the
26 new agent.
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